

ME Undergraduate Curriculum (Catalog: 2019 - 2020)

1st Year	Fall	CHEM 1310 General Chemistry (See Note 2) 3-3-4	MATH 1551 Differential Calculus (Minimum Grade C) 2-0-2	MATH 1553 Linear Algebra (Minimum Grade C) 2-0-2	Legislative HIST 2111, HIST 2112, POL 1101, INTA 1200, or PUBP 3000 [Social Science] 3-0-3	ENGL 1101 English Composition 1 3-0-3	Wellness APPH 1040 or APPH 1050 2-0-2	
	Spring	PHYS 2211 Physics 1 (Minimum Grade C) 3-3-4 MATH 1551, MATH 1552*	MATH 1552 Integral Calculus (Minimum Grade C) 4-0-4 MATH 1551	CS 1371 Computing for Engineers 3-0-3	ME 1770 Intro to Engineering Graphics (See Note 3, No W's) 2-3-3	ENGL 1102 English Composition 2 3-0-3 ENGL 1101	= 16 hours = 17 hours	
2nd Year	Fall	PHYS 2212 Physics 2 3-3-4 PHYS 2211	MATH 2551 Multivariable Calculus (Minimum Grade C) 4-0-4 MATH 1552, MATH 1553	ME 2110 Creative Decisions and Design (See Note 3, No W's) 2-3-3 ME 1770, COE 2001*	MSE 2001 Engineering Materials 3-0-3 CHEM 1310	COE 2001 Statics (Minimum Grade C) 2-0-2 MATH 1552, PHYS 2211	= 16 hours	
	Spring	ECE 3710 Circuits & Electronics 2-0-2 PHYS 2212	MATH 2552 Differential Equations (Minimum Grade C) 4-0-4 MATH 1552, MATH 1553	ME 2016 Computing Techniques 3-0-3 MATH 1552, MATH 1553, MATH 2552*, CS 1371	ME 2202 Dynamics of Rigid Bodies 3-0-3 COE 2001, MATH 1553*	Social Science Elective (See Note 6) 3-0-3	= 15 hours = 16 hours	
3rd Year	Fall	ECE 3741 Instrument & Electronics Lab 0-3-1 ECE 3710	COE 3001 Mechanics of Deformable Bodies 3-0-3 COE 2001, MATH 2552*	ME 3322 Thermodynamics 3-0-3 PHYS 2211, MATH 2552	ME 3340 Fluid Mechanics 3-0-3 ME 2202, MATH 2551 MATH 2552, ME 3322*	Economics ECON 2100, 2101, 2105, or 2106 (See Note 5) 3-0-3	Humanities Elective (See Note 6) 3-0-3	
	Spring	ME 3017 System Dynamics 3-0-3 ME 2202, ME 2016, MATH 2552, ECE 3710	ME 3345 Heat Transfer 3-0-3 ME 3322, ME 3340, MATH 2552	ME 3057 Experimental Methods Lab (See Note 3, No W's) 2-3-3 COE 3001, ME 3340, ME 3017*, ME 3345*, MATH 3670*	ISYE 3025 Engineering Economics 1-0-1 ECON 2100, 2101, 2105 or 2106	MATH 3670 Statistics & Applications 3-0-3 MATH 2551	Social Science Elective (See Note 6) 3-0-3	
4th Year	Fall	Design Elective ME 3180 or ME 4315 3180: Machine Design 4315: Energy Sys Design 3-0-3 ME 2110, ME 3345 (for ME 4315 only), COE 3001 (for ME 3180 only)	ME 3210 Design, Materials & Manufacture 3-0-3 MSE 2001, ME 2110	ME 4056 ME Systems Lab (See Note 3, No W's) 2-3-3 ME 3057, ME 3345, ME 3017, MATH 3670	Free Elective 1000 Level or Above (See Note 1) 3-0-3	Free Elective 1000 Level or Above (See Note 1) 3-0-3	= 16 hours = 15 hours = 18 hours	
	Spring	ME 4182 Capstone Design (See Note 3, No W's) 1-6-3 COE 3001, MATH 3670, ME 2110, ME 3210, ME 3017, ME 3345, (ME 3180 or 4315)	ME Elective 3000 Level or Above ME Class (See Note 4) 3-0-3	Humanities Elective (See Note 6) 3-0-3	Free Elective 2000 Level or Above (See Note 1) 3-0-3	Free Elective 2000 Level or Above (See Note 1) 3-0-3	Free Elective 2000 Level or Above (See Note 1) 3-0-3	

NOTES: * Class co-requisites have an asterisk (*) after it. These classes can be taken prior to or at the same time.

129 Total Hours

- Free Electives:** See page 2 for free elective requirements.
- CHEM 1310:** CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.
- ME 1770, 2110, 3057, 4056 & 4182** cannot be dropped after phase 2 registration closes without documented medical reasons.
- ME Elective:** Any ME class that is 3000 level or above, excluding ME 3141, 3700, 3720, 3743, 3744, 4699, 4741, 4742, 4753 and 4903. See backside for ME Elective requirements and a link to class options.
- Economics:** Students can receive credit for only one of ECON 2100, ECON 2101, ECON 2105 & ECON 2106. The only exception is that students can receive 6 hours credit for both ECON 2105 and ECON 2106.
- Humanities Electives and Social Science Electives:** See backside for a link to the list of classes.
- Ethics Overlay** is taken as part of the curriculum as a free elective, humanities or social science elective. See backside for details.

<http://www.me.gatech.edu/undergraduate/ug-curr>

Overlay Area

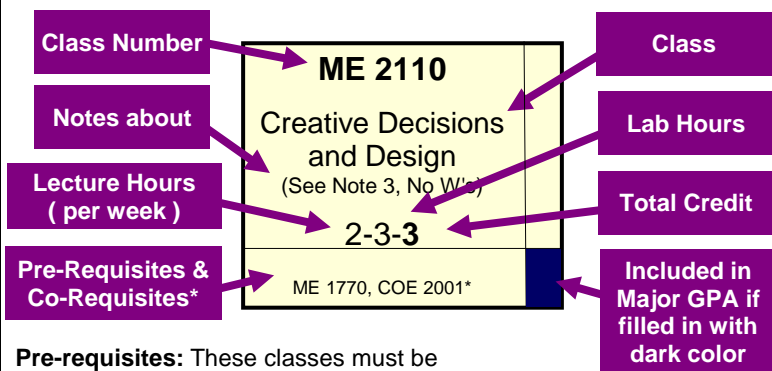
Ethics

(See Note 7)

3-0-3

Undergraduate Curriculum Sheet Explanation - Page 2

Understanding the Curriculum Guide



Pre-requisites: These classes must be completed before you can take the class.

***Co-requisites:** These classes can be taken at the same time or before the class. You must register for the co-req first to avoid registration errors.

GPA & Grade Requirements

- All classes taken for the BSME degree must be taken LETTER GRADE. This includes all electives.
- Overall GPA:** Must be 2.00 or above (truncated) at graduation.
- Required Grades:**
 - Minimum grade of a D or better is required except as noted.
 - If a pre-requisite for an ME class requires a C or better, the C is required before taking the next class. Ex: A grade of C or better is required in COE 2001 before taking ME 2202.
- Major GPA:**
 - Must be 2.00 or above (truncated) at graduation.
 - Classes used to calculate it are all ME and COE classes required by name and number plus MSE 2001, ECE 3710, ECE 3741, ISYE 3025, Design Elective and ME Elective.
 - Among the courses used to compute this, all courses must be completed with a C-or-better with the exception up to 9 credit hours, that can be satisfied with a grade of D.

Humanities, Social Sciences and Overlay Requirement (Ethics)

- Humanities Electives:** See <http://catalog.gatech.edu/academics/undergraduate/core-curriculum/core-area-c/>
- Social Science Electives:** See <http://catalog.gatech.edu/academics/undergraduate/core-curriculum/core-area-e/>
- Ethics Overlay:** A 3 hour class selected from <http://catalog.gatech.edu/academics/undergraduate/core-curriculum/ethics/>

ME Electives

- A list of ME Electives offered each semester is at <http://www.me.gatech.edu/undergraduate/registration#sp>
- ME electives are 3000-level or above ME classes, excluding ME 3141, 3700, 3720, 3743, 3744, 4699, 4741, 4742, 4753 & 4903. Other excluded classes may be added to the list throughout the year as new courses are created.
- ME electives cannot duplicate any material taken in other classes used for your BSME degree.
- Design Electives:** Students may take both design electives. One class will satisfy the design elective and the other class can satisfy an ME Elective or Free Elective.

Free Electives

- Students can use either a max of 6 credits of VIP (Vertically Integrated Project) courses or a max of 6 credits of research / special problems courses (2699, 4699 & 4903) as free electives. If doing both types of courses, a total of 9 credits is allowed.
- At least 9 hours of free electives must be at the 2000 level or above with the exception of 4 hours that may be satisfied with one of the following: BIOL 1510, BIOL 1520, or CHEM 1212K.
- Free electives may not duplicate any material taken in other classes used for your BSME degree.

Concentrations (Optional - Not Required)

Concentrations: Automation & Robotics, Automotive Engineering, Design, Manufacturing, Mechanics of Materials, Micro- & Nano-Engineering, Nuclear Energy, Thermal Fluid & Energy System See: www.me.gatech.edu/undergraduate/ug-curr/concentrations

Pre-Requisites

- The ME curriculum has a 7 or 8 semester pre-requisite chain, depending on the design class selected.
- Students can select either ME 3180 or ME 4315 for the design elective. More students select ME 3180.
- Pre-reqs are strictly enforced in ME. Carefully plan your schedule in advance and have it checked by an advisor!**

Upon completion of these classes, you will have a minimum of (...) semesters remaining until graduation.

Machine Design (ME 3180) for the Design Elective	Minimum # of Semesters	Energy Systems Design (ME 4315) for the Design Elective
	7	MATH 1551
MATH 1551	6	MATH 1552, PHYS 2211
MATH 1552, PHYS 2211	5	COE 2001, MATH 1553
COE 2001, MATH 1553	4	ME 2202, MATH 2551, MATH 2552
MATH 2551, MATH 2552, PHYS 2212, ME 2202, CS 1371, ME 1770, CHEM 1310	3	ME 1770, ME 3322, ME 3340, CS 1371, PHYS 2212, CHEM 1310
ME 2110, ME 3322, ME 3340, ME 2016 ECE 3710, COE 3001, MSE 2001	2	COE 3001, ME 2110, ME 3345, ME 2016, ECE 3710, MSE 2001
ME 3180, ME 3057, ME 3345, ME 3017 ME 3210, MATH 3670	1	ME 4315, ME 3017, ME 3057, ME 3210, MATH 3670
ME Elect, ME 4182, ME 4056, ECE 3741, ISYE 3025	0	ME Elect, ME 4182, ME 4056, ISYE 3025, ECE 3741